

G. pectinata was especially studied, whose rhizome BOODLE³⁷ had discovered to be solenostelic. This has now been confirmed, solenostely with leaf gaps being found. It is concluded that Egleichenia represents a series of reduction forms from the Mertensia type (represented by *G. flabellata*), and that Mertensia includes the most primitive species as well as the most advanced (*G. pectinata*), in which a solenostelic structure has been derived from a protostelic.—J. M. C.

Ovule of Julianiaceae.—Miss KERSHAW³⁸ sees in the integumental vascular strands and free nucleus of this recently established Mexican family a suggestion of relationship between Juliania and Juglans, and especially in the association of this structure in both genera with the outgrowth at the base of the ovule known as the obturator. The suggested connection with Anacardiaceae is confirmed by the integumental vascular strands of Mangifera, but in that genus there is no indication of an obturator.—J. M. C.

Chlorophyll in evergreens.—Miss CÄCILIE STEIN reports³⁹ that crude chlorophyll (i. e., all the pigments) increases in amount with the season, and from February to March far more than from March to May; from that time on it seems about constant. The chlorophyll proper increases likewise and decidedly more than the xanthophyll. This, she suggests, may be due to the conversion of the xanthophyll into chlorophyll; but KOHL's experiments strongly antagonize such an explanation.—C. R. B.

Stock and scion.—At a meeting of the Botanical Society of France last March GRIFFON discussed the results of his numerous experiments in grafting during 1908,⁴⁰ and declared that, whatever the plants employed (Solanaceae, Leguminosae, Compositae), and whether the graft was simple or mixed, there was no trace of asexual hybridization, but further confirmation of the specific independence of the stock and scion.—C. R. B.

An abnormal Funaria.—DIXON⁴¹ describes a plant of *Funaria hygrometrica* from Tonduff having the perigonial leaves fringed by a double row of protuberant and more or less flask-shaped cells which are supposed to function as reservoirs of water supplementary to the paraphyses for keeping the antheridia well supplied.—C. R. B.

³⁷ BOODLE, L. A., On the anatomy of the Gleicheniaceae. *Annals of Botany* 15:703. 1901.

³⁸ KERSHAW, E. M., Note on the relationship of the Julianiaceae. *Annals of Botany* 23:336, 337. 1909.

³⁹ STEIN, CÄCILIE, Beiträge zur Kenntnis der Entstehung des Chlorophyllpigmentes in den Blättern immergrüner Koniferen. *Oesterr. Bot. Zeits.* 59:231-245, 262-269. 1909.

⁴⁰ GRIFFON, E., Troisième série de recherches sur la greffe des plantes herbacées. *Bull. Soc. Bot. France* 56:203-210. *pls.* 3, 4. 1909.

⁴¹ DIXON, H. N., A remarkable form of *Funaria hygrometrica*. *Bryologist* 12:49-51. *pl.* 5. 1909.